LFHCal Pedestal Comparisons

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March 4, 2026

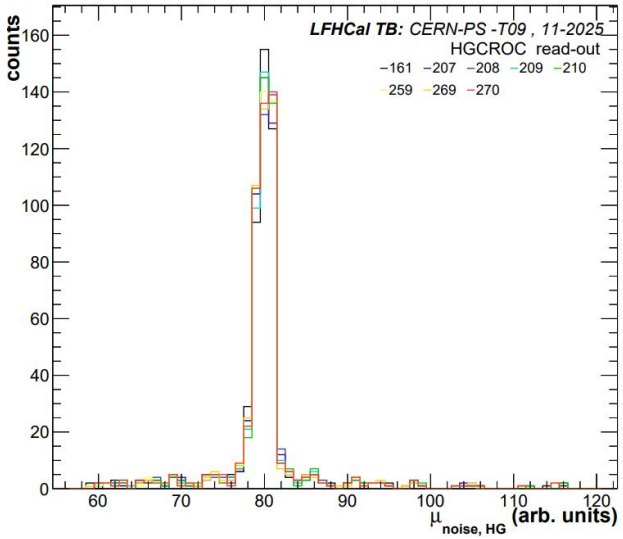
Comparing Pedestal Runs from 2025 TB Data

- 1st Set (8 runs):
  - 161 – 270
- 2nd Set (8 runs):
  - 291 – 317
- 3rd Set (7 runs):
  - 318 – 391

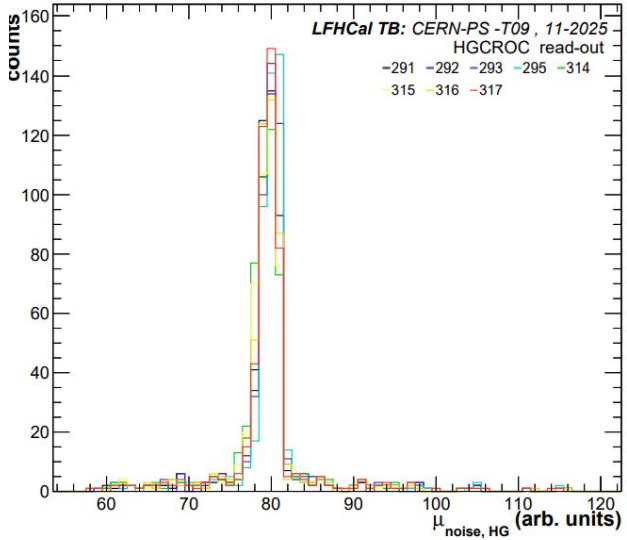
- Observables:
  - Mean Pedestal Noise for High Gain
  - Mean Pedestal Noise Width for High Gain
  - Mean Pedestal Noise for Low Gain
  - Mean Pedestal Noise Width for Low Gain
  - For Each Layer (32 Total):
    - Comparison of Mean Pedestals and Mean Pedestal Widths for each run and for each row (2 Tot) and column (4 Tot)

Comparing Mean High Gain Pedestal Noise

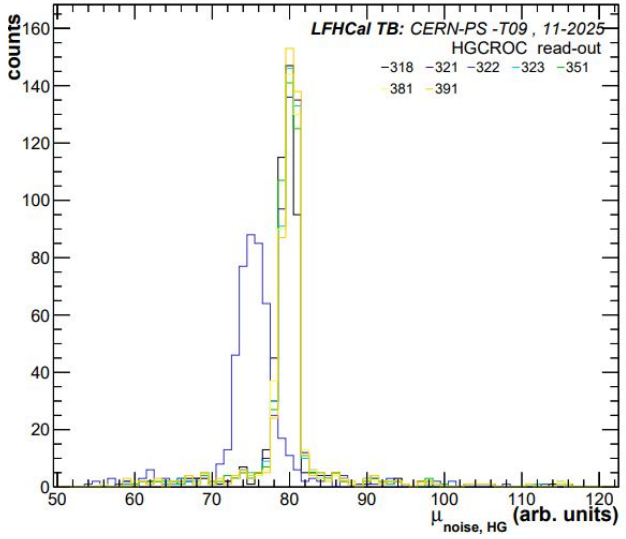
Runs 161-270



Runs 291-317

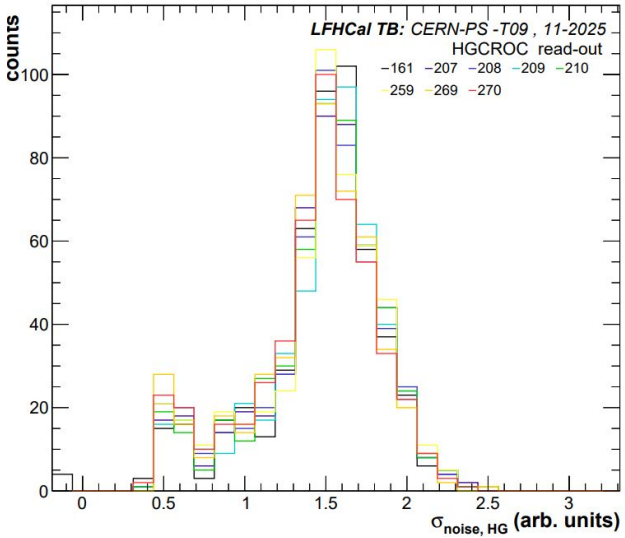


Runs 318-391

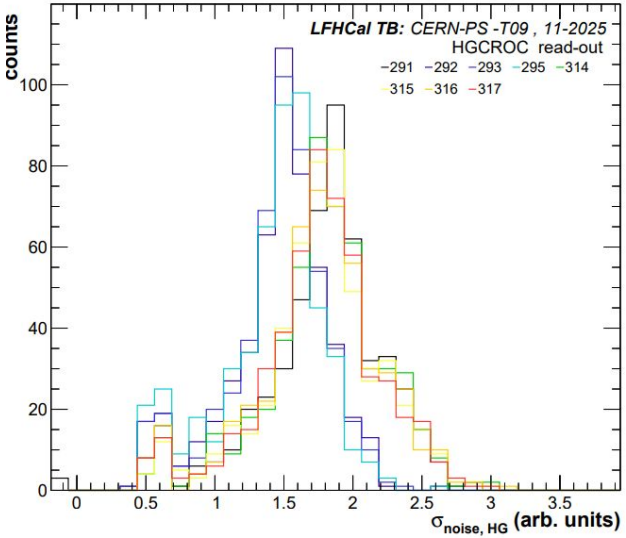


Comparing Mean High Gain Pedestal Noise Width

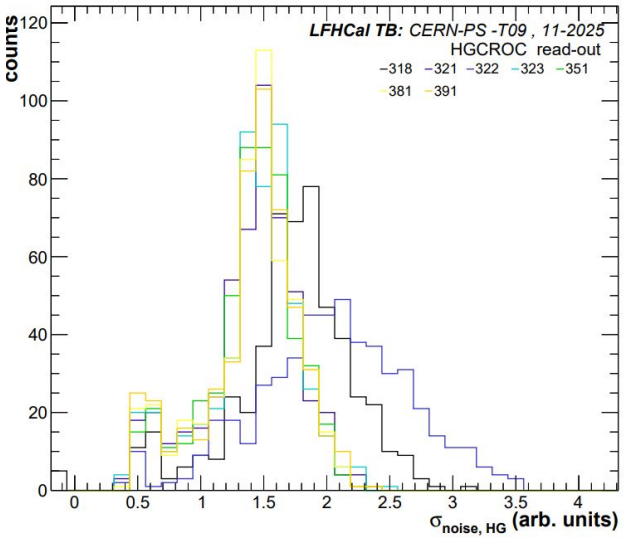
Runs 161-270



Runs 291-317

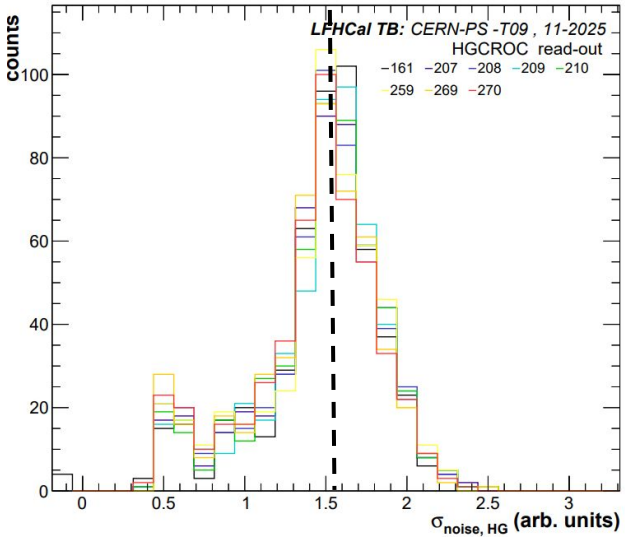


Runs 318-391

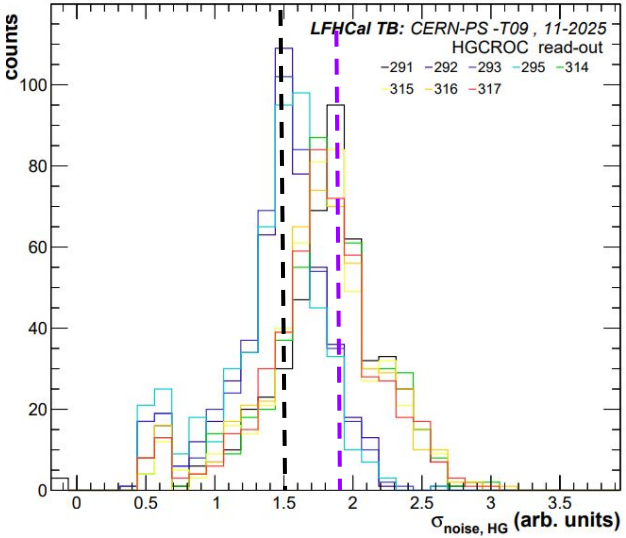


Comparing Mean High Gain Pedestal Noise Width

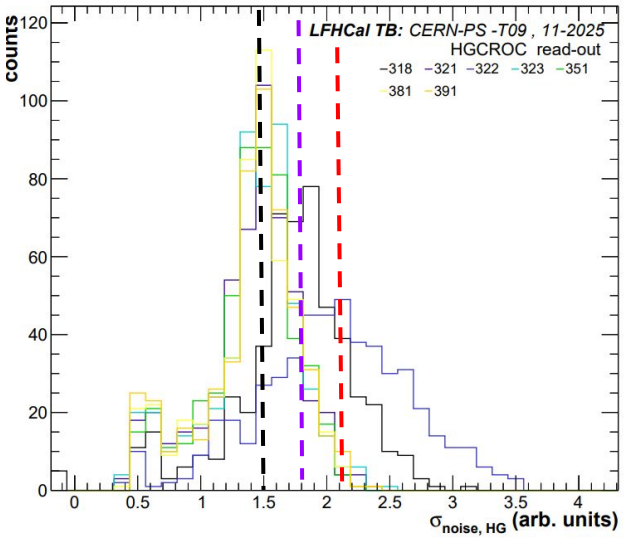
Runs 161-270



Runs 291-317

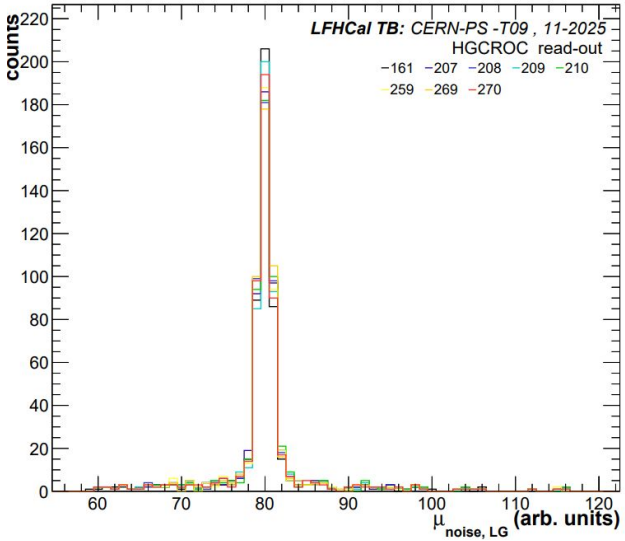


Runs 318-391

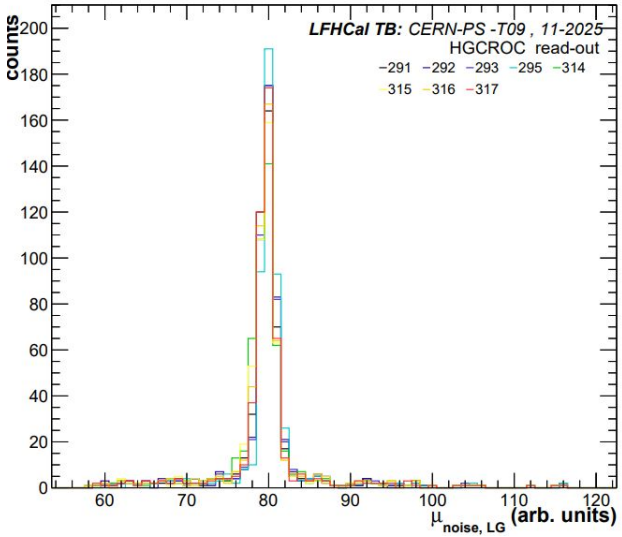


Comparing Mean Low Gain Pedestal Noise

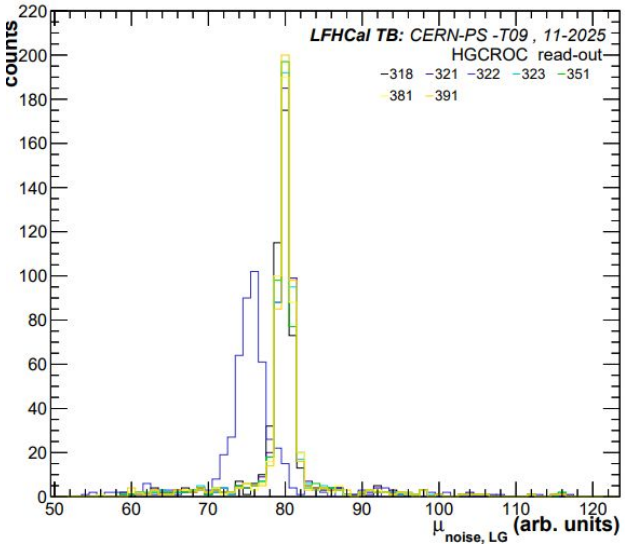
Runs 161-270



Runs 291-317

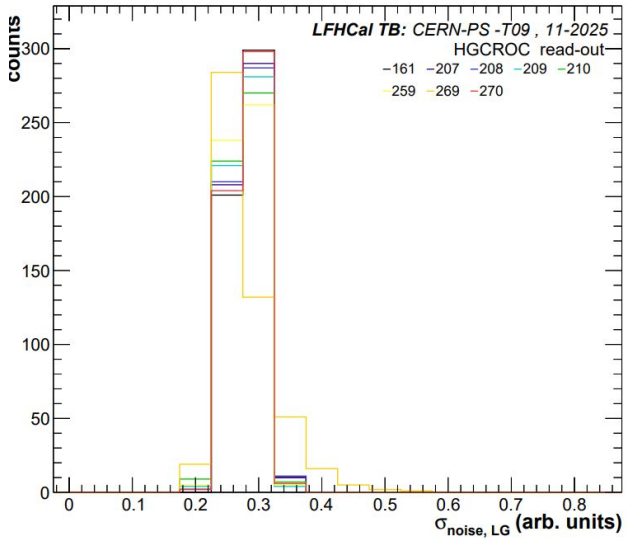


Runs 318-391

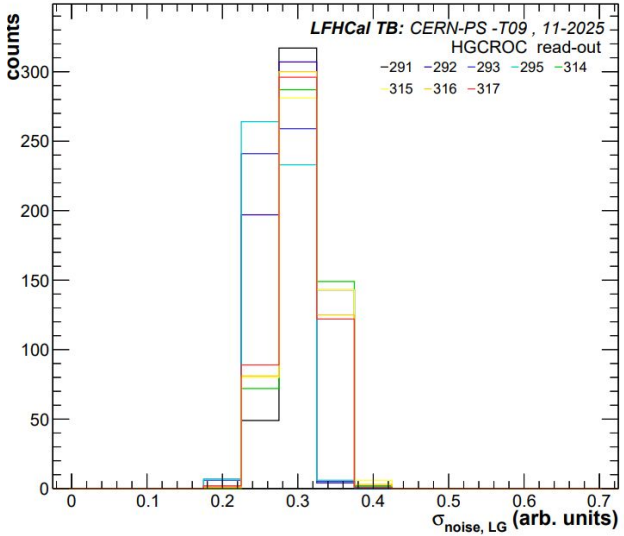


Comparing Mean Low Gain Pedestal Noise Width

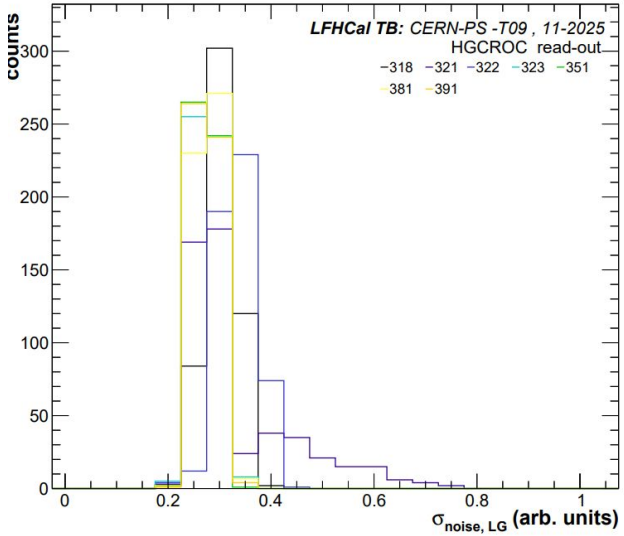
Runs 161-270



Runs 291-317

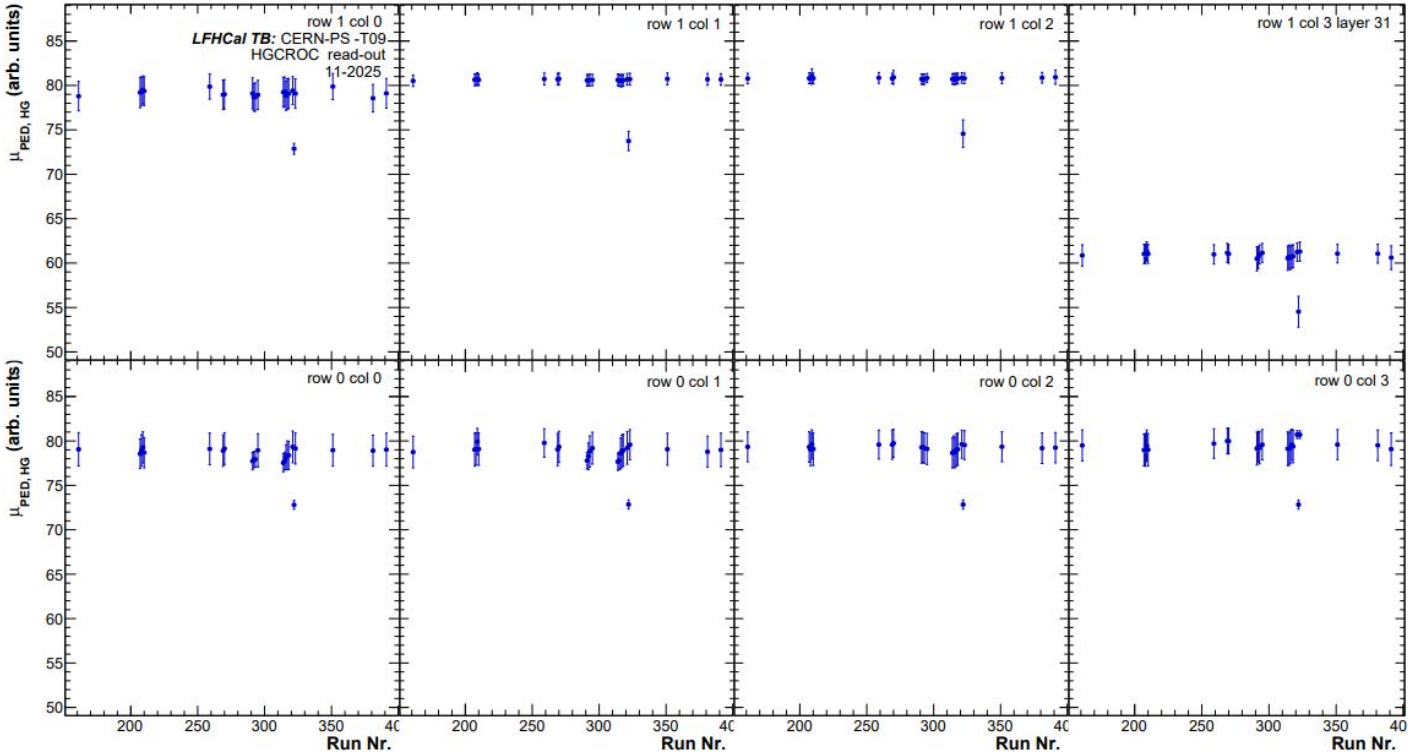


Runs 318-391



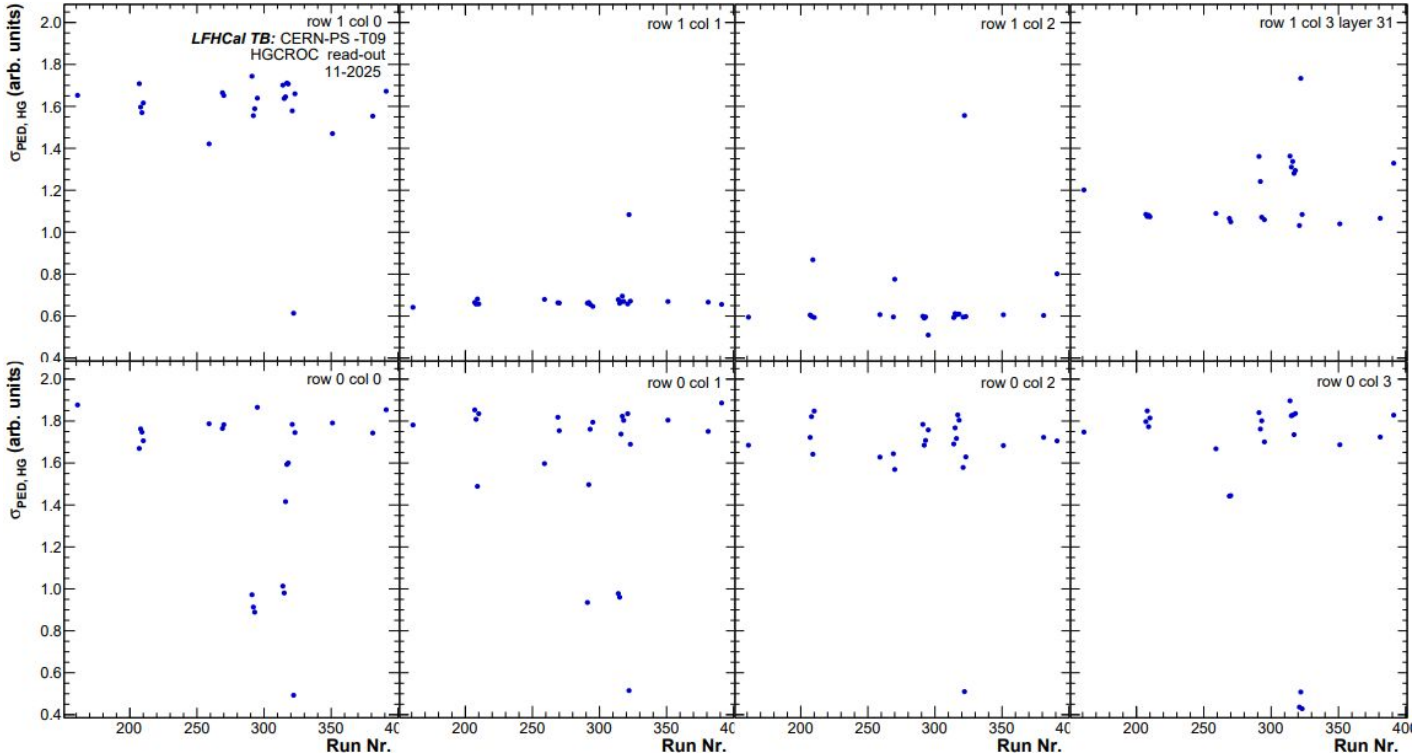
Comparing Mean HG Pedestal in each Row+Column of each Layer

Runs 161-391



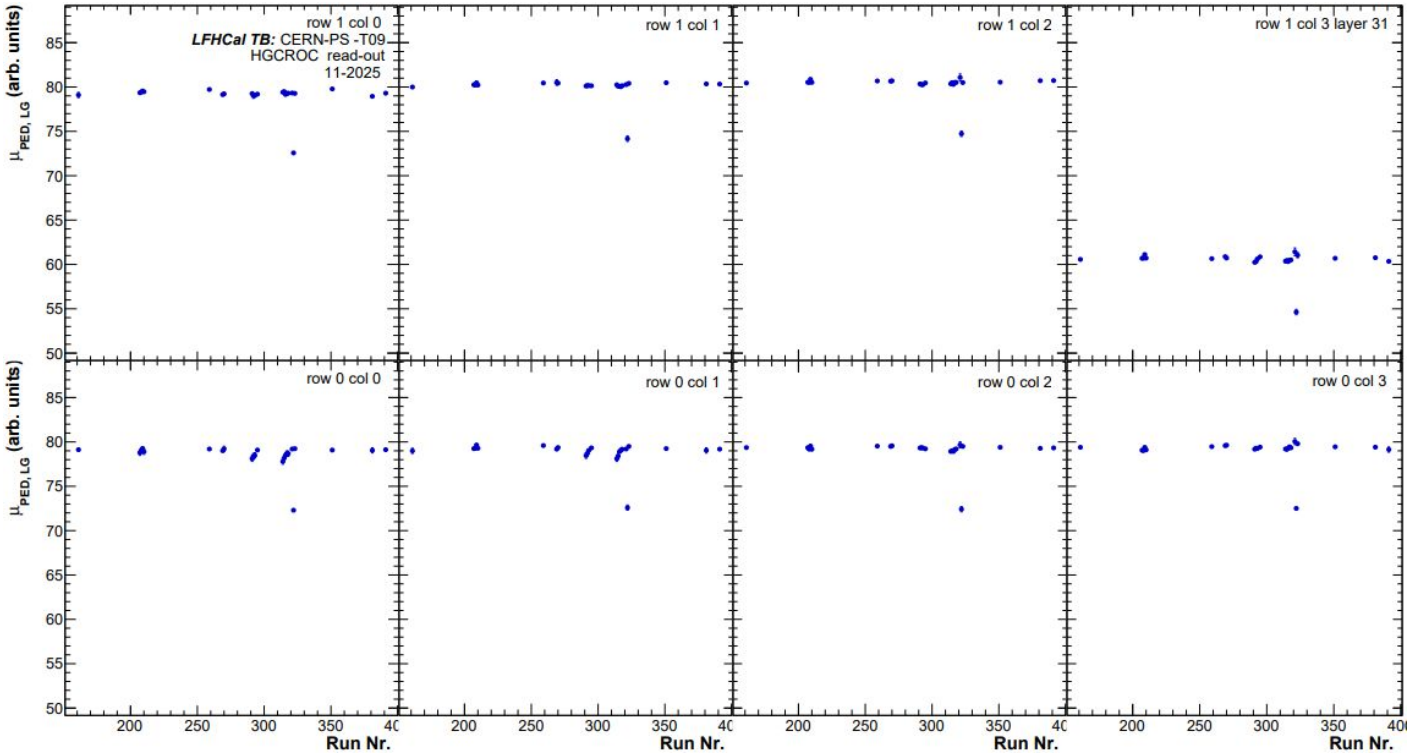
Comparing Mean HG Pedestal Width in each Row+Column of each Layer

Runs 161-391



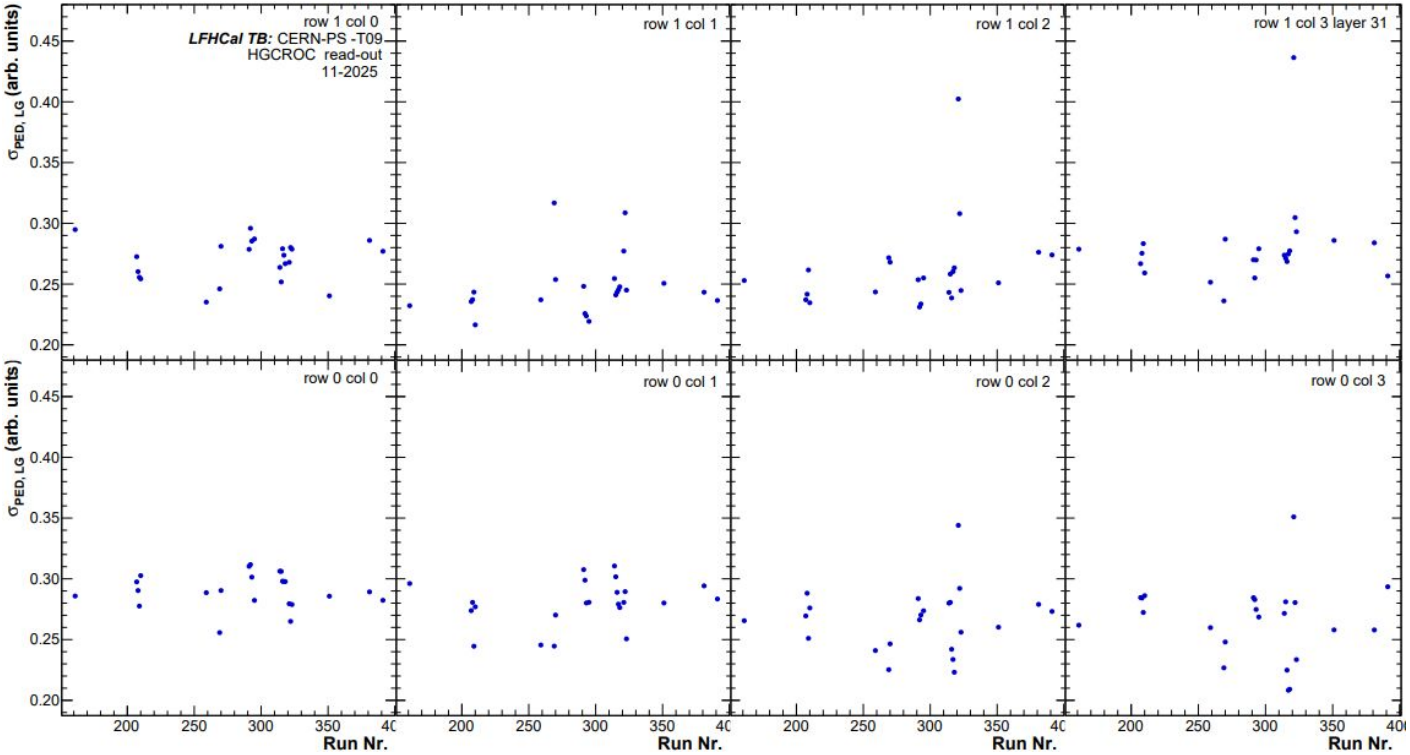
Comparing Mean LG Pedestal in each Row+Column of each Layer

Runs 161-391



Comparing Mean LG Pedestal Width in each Row+Column of each Layer

Runs 161-391



Observations

- In most plots, we see an outlier for run 322, which was during configuration 3 and according to the logbook it had a bias voltage of 0 and the number of reconstructed triggers was half the amount of other pedestal runs